



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

002885

C250
Job Sheet 176437



Part No: C250

Job Qty: 1 ea

Part Name: C-Series Remote Hook 25,000 lbs Lift Capacity



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/24/18

Job Tracking No:

Due Date: 4/27/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: C250 REV.2 IPP REV:A 18.02.20 NEW ISSUE DD VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		4/27/18	0.00	0.00	Start Up Small Fab-4		
100	Small Fab	1 pcs		4/27/18	0.00	1.00	Small Fab-9		
110	QC	1 pcs		4/27/18	0.00	0.00	QC5		
125	DC	1 pcs		4/27/18	0.00	0.00	DC		
130	Packaging	1 pcs		4/27/18	0.00	0.00	Packaging3-2		
140	QC21-FG	1 Ea		4/27/18	0.00	0.00	QC21		

Part Op **100** - 1- PICK C250-100 AND LASER ENGRAVE AS PER DWG . SEE NOTE 3 AND 4 ON SHEET 3. 2- ASSEMBLE AS
Descriptions: PER DWG 3- PERFORM ALL NECESSARY TEST USING FAI TEST SHEET.

125 - Photocopy blue file and create labels as per O&OPM-C250

130 - Identify and Stock

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CANADA S1A 6S2-5200
TEL: (613) 632-5200
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www.dartaerospace.com

Container No: S064360

Part: C250

Job No: 176437

Serial No/Batch: S064360

Revision: 2

Inspector:

Date: 04/24/18

linda

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MS27039-4-06	Screw	1 Ea (1 ea)	90-Start up Operation	FM 124534
1400-0037	Snap Ring See part # C45-3-2-1	2 Ea (2 ea)	100-Small Fab	5053841
2595K22	Heat Shrink Tube	1 Ea (1 ea)	100-Small Fab	8049575
32448	16-14 AWG Knife Connector	2 Ea (2 ea)	100-Small Fab	8041618
5100-0062-SPP	Retaining Ring <i>PC 250-550</i>	2 Ea (2 ea)	100-Small Fab	5029372
6907K14	Strain Relief Connector	1 pcs (1 ea)	100-Small Fab	5044112
6NBC914YZP	Latch Bearing <i>C10-9-2</i>	1 pcs (1 ea)	100-Small Fab	5012244
6NBF817YJ	Lever Arm Bearing	1 Ea (1 ea)	100-Small Fab	5051915
7216K5	Male Plug color, yellow <i>EL-Plug-M</i>	1 pcs (1 ea)	100-Small Fab	5031224
90145A591	Location Pin	3 Ea (3 ea)	100-Small Fab	5048605
91102A740	Lock Washer	16 Ea (16 ea)	100-Small Fab	5048559
91257A755	Bolt	3 Ea (3 ea)	100-Small Fab	5048606
91257A758	Bolt	1 Ea (1 ea)	100-Small Fab	5048558
92196A276	Screw	16 Ea (16 ea)	100-Small Fab	5049574
92313A535	Set Screw	2 pcs (2 ea)	100-Small Fab	5049573
92373A271	Anchor Pin	2 Ea (2 ea)	100-Small Fab	5048607
94355A330	Set Screw	2 Ea (2 ea)	100-Small Fab	5049572
98410A110	Retaining Ring	6 pcs (6 ea)	100-Small Fab	5054327
AN4-23A	Bolt	2 Ea (2 ea)	100-Small Fab	5123434
C10-11 P	Manual Release Knob	1 Ea (1 ea)	100-Small Fab	5029192
C10-23-2	Keeper Spring	2 pcs (2 ea)	100-Small Fab	5047888
C20-570 P	Lock Return Spring	1 pcs (1 ea)	100-Small Fab	5029229
C20-735 P	Lever Arm Return Spring	1 pcs (1 ea)	100-Small Fab	5029230
C20-740	Link Spring	1 Ea (1 ea)	100-Small Fab	5047889
C250-100	Side Plate Cover	1 Ea (1 ea)	100-Small Fab	5063670
C250-200	Side Plate Housing	1 Ea (1 ea)	100-Small Fab	5063697
C45-8-4	Solenoid Cover Gasket	1 Ea (1 ea)	100-Small Fab	5060124
C45-8-5	Solenoid Cover	1 Ea (1 ea)	100-Small Fab	5046392
EL314-SJTOW	3 Wire	1 ft (1 ea)	100-Small Fab	5047767
MS21044N8	Nut, Self-Lock .500-20,UNJF-3B	4 Ea (4 ea)	100-Small Fab	5036471
MS21083N4	Nut	2 Ea (2 ea)	100-Small Fab	5060423
NAS1149F0432P	Washer	2 Ea (2 ea)	100-Small Fab	5050055-1
NAS1149F0463P	Washer	3 Ea (3 ea)	100-Small Fab	FM127832-25
NAS1149F0863P	Washer	8 Ea (8 ea)	100-Small Fab	5058169
PC250-220	Lower Lock Bumper	1 Ea (1 ea)	100-Small Fab	5051426
PC250-230	Upper Lock Bumper	2 Ea (2 ea)	100-Small Fab	5051419
PC250-300A	Load Beam Assembly	1 Ea (1 ea)	100-Small Fab	5061624
PC250-320	Bushing	2 Ea (2 ea)	100-Small Fab	5051396
PC250-330	Bumper Load Beam	2 Ea (2 ea)	100-Small Fab	5049804
PC250-400	Keeper Assembly	1 Ea (1 ea)	100-Small Fab	5052298
PC250-410	Bushing	4 Ea (4 ea)	100-Small Fab	5051393
PC250-480 P	Keeper Spring Spacer	1 pcs (1 ea)	100-Small Fab	5029367
PC250-500A P	Lock Assembly	1 Ea (1 ea)	100-Small Fab	5066626
PC250-510 P	Roller Pin	1 Ea (1 ea)	100-Small Fab	5029369
PC250-520 P	Roller	1 pcs (1 ea)	100-Small Fab	5029370
PC250-540	Bushing	2 Ea (2 ea)	100-Small Fab	5051394
PC250-600A P	Bell Crank Assembly	1 pcs (1 ea)	100-Small Fab	5029562
PC250-610 P	Pin	1 pcs (1 ea)	100-Small Fab	5029374
PC250-650	Bell Crank Bushing	2 Ea (2 ea)	100-Small Fab	5051395
PC250-700 P	Lever Arm	1 pcs (1 ea)	100-Small Fab	5029376
PC250-710 P	Lever Arm Pin	1 pcs (1 ea)	100-Small Fab	5029377
PC250-715	Lever Bearing Shaft	1 Ea (1 ea)	100-Small Fab	5064510
PC250-750 P	Link	1 pcs (1 ea)	100-Small Fab	5029379
PC250-760 P	Link Pin	2 pcs (2 ea)	100-Small Fab	5029380
PC250-775	Lever Arm Bushing	2 Ea (2 ea)	100-Small Fab	5066038
PC250-800 P	Clock Spring	2 pcs (2 ea)	100-Small Fab	5029382
PC250-810	Spring Cover	2 Ea (2 ea)	100-Small Fab	5029383
PC250-900A P	Solenoid Assembly	1 Ea (1 ea)	100-Small Fab	5064180

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation 100-Small Fab	MS27039-4-06	1	83	0
	1400-0037	2	0	0
	2595K22	1	28	0
	32448	2	179	0
	5100-0062-SPP	2	0	0
	6907K14	1	18	0
	6NBC914YZP	1	0	0
	6NBF817YJ	1	10	0
	7216K5	1	0	0
	90145A591	3	9	0
	91102A740	16	168	0
	91257A755	3	9	0
	91257A758	1	6	0
	92196A276	16	68	0
	92313A535	2	21	0
	92373A271	2	6	0
	94355A330	2	21	0
	98410A110	6	100	0
	AN4-23A	2	608	0
	C10-11	1	0	0
	C10-23-2	2	61	0
	C20-570	1	0	0
	C20-735	1	0	0
	C20-740	1	10	0
	C250-100	1	3	0
	C250-200	1	3	0
	C45-8-4	1	15	0
	C45-8-5	1	17	0
	EL314-SJTOW	1	1,034	0
	MS21044N8	4	75	0
	MS21083-N4	2	0	0
	NAS1149F0432P	2	2,103	0
	NAS1149F0463P	3	484	0
	NAS1149F0863P	8	854	0
	PC250-220	1	8	0
	PC250-230	2	8	0
	PC250-300A	1	0	0
	PC250-320	2	8	0
	PC250-330	2	11	0
	PC250-400	1	2	0
	PC250-410	4	24	0
	PC250-480	1	0	0
	PC250-500A	1	0	0
	PC250-510	1	0	0
	PC250-520	1	0	0
	PC250-540	2	8	0
	PC250-600A	1	0	0
	PC250-610	1	0	0
	PC250-650	2	8	0
	PC250-700	1	0	0
	PC250-710	1	0	0
	PC250-715	1	0	0
	PC250-750	1	0	0
	PC250-760	2	0	0
	PC250-775	2	0	0
	PC250-800	2	0	0
	PC250-810	2	0	0
	PC250-900A	1	0	0
Part Specifications				
Specifications could not be found.				

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Remote Cargo Hook Test Form

C250

Work Order 176437

Customer _____

Serial Number 5064360

Date 28 april 2018

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/fail
1	62,500	Static Hold	Hold for two Minutes and reduce load to zero	N/A	- Pass
10	12,500	Electircal, 25 volts	No "hang ups" permitted	N/A	- Pass
2	25,000	Electircal, 22 volts	Current shall not exceed 13.6A	9 Amp.	- Pass
2	20,000	Electircal, 22 volts	Current shall not exceed 13.6A	9 Amp.	- Pass
2	15,000	Electircal, 22 volts	Current shall not exceed 13.6A	9.5 Amp.	- Pass
2	10,000	Electircal, 22 volts	Current shall not exceed 13.6A	9.5 Amp.	- Pass
2	500	Electircal, 22 volts	Current shall not exceed 13.6A	9.5 Amp.	- Pass
1	25,000	Electircal, 20 volts	Current shall not exceed 12.4A	8.5 Amp.	- Pass
1	25,000	Electircal, 28 volts	Current shall not exceed 17.3A	13 Amp.	- Pass
1	25,000	Manual		N/A	- Pass
1	25,000	Impact Test	Impact shackle 10 times, shall not release	N/A	- Pass
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ohms	2 Ohms	- Pass
1	N/A	Electircal Continuity	Across both wires	N/A	- Pass

Test Conducted By

Mathieu Leclair

Technician

Signature:

Sylvain Pouchon
QC 5 Small FAB / QA

Submit

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>176437</u> Part No. <u>C20-570</u> NCR No. <u>(250-HOOK)</u>		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : <u>2018 / 04 / 30</u>		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval <u>M. Lee</u> <u>APRIL 30 / 18</u>																			
Description Work Order Deviation INSTALLED THE LOCK ASSY. RETURN SPRING IN A REVERSE ORIENTATION AS THE DRAWING SHOWS (LONG END ON THE LOCK ARM.)				Disposition THIS DEVIATION IS ACCEPTABLE HISTORICALLY THIS IS HOW THE SPRING HAS BEEN INSTALLED THE DRAWING WILL BE UPDATED TO REFLECT THIS CHANGE				Completed By <u>A. PATRY</u>																	
				Lead hand / Supervisor Approval Verification																					
				QC / QA Coordinator Approval																					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☒	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				OTHER : _____			